

Corrugated Installation and Technical Guide









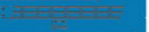

AmeriLux International, LLC, in partnership with Menards®, offers high quality polycarbonate, pvc and fiberglass panels which feature the latest in product technology.

Doing it yourself? Our multiwall and corrugated polycarbonate, pvc and fiberglass plastic sheets are an effective alternative to traditional glazings in a wide variety of applications including: decks, patio covers, skylights, sidelites, storage buildings, sheds, greenhouses, cold frames, awnings, canopies, carports, garage overhangs, pool enclosures, and pergolas.

The following products are stocked and available at your local Menards® store. Special order products that are not stocked can be ordered through Building Materials for in-store pickup or shipped direct to your home address for a separate fee.

Shade & Shelter for Outdoor Living

Corrugated Panels

Shade		Shade / Natural Light		
PVCLite PVC Corrugated Sheet <ul style="list-style-type: none"> • UV protected on one side • Minimum light transmission • Highly chemical resistant • Available in 8' & 12' lengths • Width coverage: approx. 24" • Available colors: White & Beige   <p>LIMITED 5-YEAR WARRANTY Product Ranking: GOOD</p>	PVCLite Plus Foamed PVC Corrugated Sheet <ul style="list-style-type: none"> • UV protected on one side • Minimum light transmission • Easy to clean • Rigidly constructed panel • Available in 8' lengths • Width coverage: approx. 24" • Available colors: Dark Red, Gray, and Green   <p>LIMITED 10-YEAR WARRANTY Product Ranking: BETTER</p>	FiberLite Fiberglass Corrugated Sheet <ul style="list-style-type: none"> • UV protected on one side • Moderate light transmission • High impact strength • Light transmission: Clear (85%) White (40%) • Available in 8' & 12' lengths • Width coverage: approx. 24" • Available colors: Clear & White   <p>LIMITED 15-YEAR WARRANTY Product Ranking: BEST</p>	CoverLite Polycarbonate Corrugated Sheet <ul style="list-style-type: none"> • UV protected on one side • 10 times stronger than acrylic • 200 times stronger than glass • Light transmission: Clear (90%) Smoke (29%) • Resistant to hail & impact damage • Available in 8' & 12' lengths • Width coverage: approx. 24" • Available colors: Clear & Smoke   <p>LIMITED 20-YEAR WARRANTY Product Ranking: PREMIUM</p>	MultiLite Multiwall Polycarbonate Sheet <ul style="list-style-type: none"> • UV protected on one side • Virtually unbreakable • 82% LT 6mm & 74% LT 16mm • Excellent insulation properties • Available in 4' x 8' sheets • Special color sizes and colors are also available   <p>LIMITED 10-YEAR WARRANTY Product Ranking: SPECIALTY</p>
Install Components				
Wave Plastic Closures Wave Foam Closures Vertical Plastic Closures Screws	Wave Plastic Closures Wave Foam Closures Vertical Plastic Closures Screws	Wave Plastic Closures Wave Foam Closures Vertical Plastic Closures Screws	Greca Plastic Closures Greca Foam Closures Vertical Plastic Closures End Wall & Ridge Cap Screws	Anti-Dust Taps 1" Screw for use with 60mm 2" Screw for use with 160mm U and H Channel

A WORLD OF POSSIBILITIES

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“Shade & Shelter for Outdoor Living” Corrugated Panels



Transportation, Handling, and Storage

The following are product handling recommendations and best practices regarding the transportation and storage of “Shade & Shelter for Outdoor Living” corrugated panels available at your local Menards® store.




Transportation:

- Transport sheets on a sturdy pallet that is at least as long as the longest panel.
- Stack the shorter sheets on top of the longer sheets.
- Always secure sheets to the pallet during transportation.
- Never put the sheets in direct contact with cements and/or paints, both of which are extremely incompatible with these panels.
- It is recommended to use thick, wooden boards to isolate sheets from contact with cements and paints.

Handling:

- Even though these corrugated sheets require little special handling, it is recommended that the sheets be protected from abrasion while handling.
- To avoid unnecessary scratching, pick up and carry sheets instead of dragging them on the ground.
- Sheets are flexible but it is not recommended to fold panels during handling or installation.
- Sheets are durable but do not walk or jump on sheets while they are laying flat on the ground.

Storage:

- Store sheets horizontally on a flat surface.
 - Stack the shorter sheets on top of the longer sheets.
 - Store stacked sheets in a well-protected and shaded area.
 - Do not stack sheets in direct sunlight. This may cause the sheets to heat up and distort.
 - If sheets are stored outdoors, cover the entire stack with a material that will not absorb or conduct heat.
 - Allow for ventilation (particularly at the highest point) to minimize heat buildup and provide air circulation, preventing moisture from getting between the stored sheets.
-  *If shipped in original crating, crate may not be sufficient to protect panels from solar heat gain damage.*

Safety Measures

Project Safety Tips:


- For safe installation of sheets, use ladders, protective goggles, and other required safety equipment.
- If you must walk or kneel on sheets during installation, use a sturdy board long enough to span three structural supports. *Never walk on installed sheets or leave unfastened sheets unattended!*

Project Planning and Installation Tips

Pitch:


Before you build your structure, you will want to determine your roof pitch. Beyond aesthetics, the main purpose of a roof's pitch is to shed water, snow, and other debris from the roof.

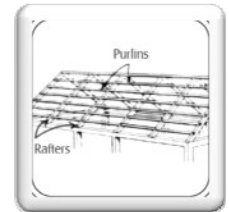


- The slope or angle of a roof is referred to as the pitch. The pitch of a roof is calculated by the number of inches it rises vertically for every 12 inches it extends horizontally.
 - Snow, wind, and weather loads should always be considered when determining your roof pitch.
 - A low roof pitch may require additional sealing to ensure weather resistance.
-  *A minimum roof pitch of 2 inches for every 12 inches is recommended.*

Rafters:


Rafters are sloping beams that make up the main framework of a roof. These framing members typically run from the roof peak down to the eaves. Rafters support the roof load and are typically combined with smaller horizontal beams.

- The slope or angle of a roof is referred to as the pitch. The pitch of a roof is calculated by the number of inches it rises vertically for every 12 inches it extends horizontally.
 - Adhering to local building codes, space rafters to hold up the weight of the roof and the roof load.
 - Recommended rafter spacing is 24 inches apart "on center".
-  *On center is the measurement from the center of one rafter to the center of the next rafter.*



Purlins:

Purlins are the horizontal framing members that span between the rafters, providing additional structural support for the roof. Purlins aid in supporting the weight of the roof deck. The roof deck is the "sheeting" that covers the surface of the roof.

- Minimum recommended nominal size for purlins is 2"x2" (two-by-two dimensional lumber).
 - Mark, measure, and attach purlins to the rafters according to your project design.
 - Maximum recommended purlin span for corrugated sheets is 24 inches.
 - In heavy snow areas, check with code authorities for specific loads and stresses.
-  *Always install purlins and space them according to your local building codes!*

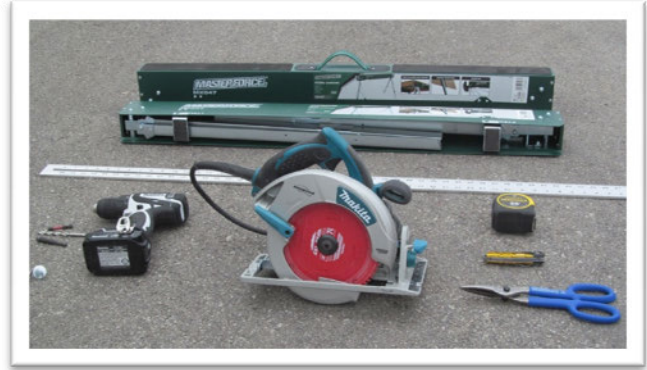
Panel	20 psf	30 psf	40 psf
PVCLite - Purlin Spacing	24"	16"	
PVCLite Plus - Purlin Spacing	24"	16"	
FiberLite - Purlin Spacing			24"
CoverLite - Purlin Spacing	36"	30"	24"

The information provided is strictly our recommendations.

Installation Tools:

Light in weight and easy to install, corrugated sheets can be fabricated on site and require no special tools for installation.

Common tools needed are: Circular Saw, Drill with a ¼" Bit, Tape Measure, Utility Knife, Straight Edge, Tin Snips, Saw Horses, and a Ladder.

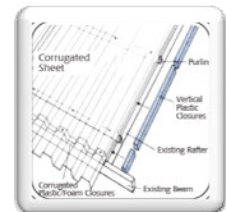


Install Components

Check the corrugated sheets and closure strips for proper fit and confirm you have all the necessary install components to complete the installation before beginning. Most projects will require one or more of the following install components.

Plastic or Foam Closure Strips:

Plastic or foam closure strips are used under corrugated sheets as fastener supports. Horizontal closure strips can be attached directly to purlins with fasteners recommended for your application. Vertical closure strips may be used for finishing the outside edges, securing them to the outside rafters.



- Plastic closure strips are durable and more rigid than foam closures.
- UV protected plastic closure strips feature interlocking ends to make installation easy.
- Foam closures are flexible and can be stretched slightly to align with panels, forming a compression fit.
- Compressing to form a weather-tight seal, foam closures are recommended for applications where energy efficiency is a concern.

Flashing:

Depending on your structure, it may be necessary to install some type of additional flashing.

- For a side wall structure, a polycarbonate end wall flashing may be used where there is a lean-to type roof sloping away from the vertical wall.
- To prevent leaks at the peak of a traditional A-shaped roof, it is recommended to install an impact resistant, polycarbonate ridge cap.



Fasteners:

Choosing the right fastener is essential to any building project. From the framing to the installation of the corrugated panels, it is important to make sure you choose the correct fastener for your specific application. If the right fastener is not chosen, product installation may fail over time.

- Wood Structure:
 - #10 Woodgrip Screw
 - ½" Neoprene bonded washer
- Metal Structure:
 - #12 Self-Drilling/Self-Tapping Screw
 - ½" Neoprene bonded washer
- Roof Application:
 - 2" or 2 ½" Screw
- Wall Application:
 - 1" or 1 ½" Screw
- Fasteners should penetrate the roof or wall of your structure by at least one (1) inch.
- ▲ *If aesthetic concerns arise using the ½" neoprene bonded washer, a smaller diameter washer may be used as long as it provides a flat bearing surface and creates an effective seal.*
- ▲ *For help with choosing the right fastener for your project, please contact your local Menards® store or call AmeriLux International at 888.602.4441.*



Sealants:

Silicone sealants may be used to keep air, moisture, dirt and debris from getting underneath the roofing panels. Do not use incompatible products.

- Silicone sealants provide outstanding durability and flexibility.
- Quality silicone sealants won't shrink or crack, providing a long-lasting, weather-tight seal.
- It is highly recommended to only use a 100% silicone product.
- Other caulking or sealants may attack the sheets.
- ▲ *Always check the silicone product label to ensure sheet compatibility.*

Paint:

It is not recommended to paint "Shade & Shelter for Outdoor Living" corrugated panels. If painting is necessary, the paint used must be compatible with the specific sheet product.

If you have any questions concerning the install components required for your project, please contact your local Menards® store or call AmeriLux International at 888.602.4441.

Doing it yourself? AmeriLux can help!



Panel Installation



Cutting:

Corrugated sheets can easily be cut or sawed with common power or manual tools. Use a circular saw at a high speed but a low advance rate for straight, long cuts. Three or four sheets may be cut at one time. For curved cutting, a jigsaw or metal cutting shears is recommended.

- While cutting, clamp sheets to avoid vibration and ensure clean cuts.
 - Always wear protective goggles when cutting!
 - When making pointed turns in the direction of the cut, drill a hole where the two cuts are to intersect, then cut through the hole.
 - Keep all cutting areas clean. Blow away debris with compressed air prior to installation.
- ⚠ *It is recommended to cut polycarbonate or pvc corrugated sheets with a fine tooth (10 to 12TPI) blade.*
- ⚠ *It is recommended to cut fiberglass corrugated sheets using a masonry blade.*

Sheet Orientation and Panel Positioning:

The UV-protected coating on the exterior side of the sheet helps to prevent fading and cracking. All corrugated panels have a product label indicating the exterior side of the sheet. This UV-protected side must face towards the sun. If the panels are not orientated correctly, the warranty may be voided.



- Begin installation on the side away from the wind and rain direction.
 - Work left or right accordingly. Never start from both sides and work to the middle.
 - Install corrugated sheets with ribs running vertically.
 - An overlap of at least one corrugation is recommended. Do not stretch or force sheets to overlap.
 - The upper sheet in the overlap should be in the up-wind direction.
 - If necessary, cover long spans by overlapping sheets a minimum of 4 inches.
 - Sheets should overhang the lowest purlin by at least 1 inch, but no more than 3 inches.
- ⚠ *Make sure the UV-protected side of the sheet faces upward or towards the sun.*

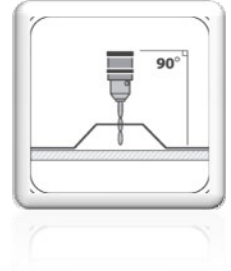
Bending:

The flexibility of the sheet is sufficient to allow for longitudinal curves. It is not recommended to flex or install a corrugated panel to the point of buckling. This may cause rapid sheet deterioration in the highly stressed areas.

- *Sheets can be cold bent to a variety of diameters. Ribs must follow the bending of the panel.*
 - *This maintains the strength of the panel and ensures the ribs are sloped downward for proper drainage.*
- ⚠ *Contact your local Menards® store or call AmeriLux International at 888.602.4441 for more information.*

Drilling:

Temperature change causes expansion and contraction and any resistance can cause sheet distortion. Therefore, fixing holes must be pre-drilled for each fastener to allow for this thermal movement.

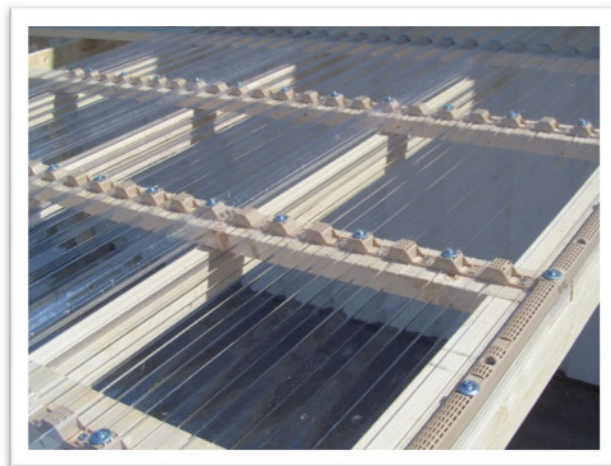


- Using a ¼" inch bit, pre-drill a hole in the panel for each fastener.
 - Pre-drill holes 3/32" larger than screw diameter to allow for expansion and contraction.
 - Drill sheets at a low speed, supporting the sheet underneath to avoid unnecessary vibration.
 - Sheets may be drilled using any common power drill intended for metal.
 - Drill holes through the crest of the corrugation for roofing and through the valleys for walls.
- ⚠ Drilling debris can easily be blown away with compressed air.*

Fastening:

Start fastening the sheet at the bottom, moving towards the top of panel. Do not fasten at both ends and move towards the middle. Attach the sheet to the purlins using fasteners recommended for your specific application.

- Fasten sheets at the peak of every other corrugation for both roof applications and wall applications.
 - Sheet edges at the ridge and gutter should also be fastened at every other corrugation.
 - Fixing with at least ½" neoprene bonded washers is recommended.
 - Drive fasteners perpendicular to the corrugated sheet.
 - Double check that all fasteners are properly secured.
 - A correctly installed fastener will sit flush against the panel. Make adjustments as needed.
- ⚠ Do not over tighten screws. Over tightening causes sheet distortion, leading to cracks and fractures.*




Care and Maintenance

Cleaning:

“Shade & Shelter for Outdoor Living” corrugated panels are not resistant to abrasion. Please clean sheets in accordance with these guidelines to maintain panels for long term use.



- Normal dirt and dust accumulation should be sufficiently washed off by periodical rains.
 - Regular rinsing of sheets with clean, lukewarm water is sufficient in most dry areas.
 - Mild household detergent may be used with a soft rag.
 - Do not scrub or use brushes, brooms, or any cleaning tool that may easily cause abrasion.
 - Never use aggressive or abrasive cleaning agents or glass cleaners. These may chemically attack sheets.
-  *Never use corrosive chemical detergents to clean corrugated sheets.*





Chemical Resistance:

“Shade & Shelter for Outdoor Living” corrugated panels are resistant to a variety of chemicals. For a complete list of all compatible and incompatible materials, please contact your local Menards® store or AmeriLux International, LLC at 888-602-4441.

Warranty

AmeriLux International, LLC warrants the original purchaser that sheets will not rot, corrode, mold or mildew when kept clean through semi-annual washing to remove accumulated dirt. A pro-rate depreciation charge will be applied to the original purchaser’s price of sheets.

Listed below are the Corrugated Sheet Brands and Years of Warranted Coverage:

-  PVCLite Corrugated Sheet | Limited 5-Year Warranty
-  PVCLite Plus Foamed PVC Corrugated Sheet | Limited 10-Year Warranty
-  FiberLite Corrugated Sheet | Limited 15-Year Warranty
-  CoverLite Polycarbonate Corrugated Sheet | Limited 20-Year Warranty

It is important to note that all AmeriLux International, LLC sheets are protected on one side with a special weathering Ultra-Violet (UV) radiation prevention treatment. This protected side *must* be installed on the exterior side of the installation for the warranty to be in effect. Warranty applies only to sheets stored, installed, cleaned, and maintained in accordance with AmeriLux International, LLC’s recommendations. For warranty details, please contact your local Menards® store or call AmeriLux International at 888.602.4441.

